

Patent Application No. 10/643,253

**REMARKS**

This Amendment is in response to the Office Action dated July 14, 2005. In the Office Action, claims 1-27 were rejected under 35 USC §102. By this Amendment, claims 1 and 4 are amended, claim 28 is added, and claims 2 and 3 are canceled. Currently pending claims 1, 4 and 5-27 are believed allowable, with claims 1, 4, 8, 13, 17 and 23 being independent claims.

**CLAIM REJECTIONS UNDER 35 USC §102:**

Claims 1-27 were rejected under 35 USC §102 as anticipated by U.S. Patent No. 6,167,525 issued to Donazzi et al. (hereinafter "Donazzi"). To anticipate a claim under 35 USC §102, a reference must teach every element of the claim. MPEP 2131.

**Claim 1**

Claim 1 is currently amended to include all the elements and limitations of claims 2 and 3. Thus, claim 1 is an independent form of claim 3, and is not amended to overcome the cited art or for reasons of patentability.

Claim 1 is a method for predicting the failure of an electronic circuit in an electronic device. The Examiner alleges that Donazzi also teaches such a method. The Applicant respectfully disagrees with such a conclusion. Donazzi states,

The present invention relates to a method and a system for transporting electric power in a link, in particular to a method and a system for the analysis of the status of an electric power transmission link and the relevant current rating capability control.

For the purposes of the present invention, electric power transmission link means a system which includes means carrying electric current from a source, such as a generator, to a user, such as a city, a factory, or another kind of entity requiring supply of electric power; these means carrying electric current include electric cables, electric conductors, such as aerial conductors, accessories thereof, such as joints, terminations, junctions etc., arranged to provide the required power transport capability. Donazzi, col. 1, lns. 9-23 (emphasis added).



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Thus, contrary to the Examiner's interpretation of Donazzi, it is plainly evident that Donazzi relates to analysis of electric power transmission and has nothing to do with predicting the failure of an electronic circuit in an electronic device.

The claim also recites, in part, "monitoring at least one operating condition of the electronic circuit, wherein the operating condition includes a CPU utilization level." In rejecting claim 3, the Office Action apparently alleges Donazzi teaches monitoring a CPU utilization level. The Applicant respectfully disagrees with such a reading of Donazzi.

The Office Action cites Donazzi at column 9, lines 30-33 as supporting the rejection of claim 3. This citation reads, "The local processing unit LPU processes the received data, identifies critical data of each segment and of each link, performs alarm generation and stores historical and real time data." Donazzi, col. 9, ln. 30-33.

Donazzi teaches that sensor data is transferred from a local programmable logic controller unit (PLC) to the LPU, where the data is processed. Donazzi, col. 9, ln. 17-18 and 30-33. Clearly the LPU utilization level is not monitored by Donazzi. Specifically, Donazzi employs the LPU to process the sensor data collected along the transmission line.

Furthermore, it is respectfully submitted that nowhere in Donazzi is there a teaching of "determining if the measured current draw is outside a pass range for the measured environmental condition and for the operating condition of the electronic circuit," as recited in claim 1. In rejecting claim 3, the Examiner apparently equates current overload to an operating condition of the electronic circuit. Such a conclusion contradicts the plain meaning of the terms "current overload" and "operating condition."

A current overload is a situation where an electrical machine or system is subjected to a greater load than it was designed for. See [http://en.wikipedia.org/wiki/Electrical\\_overload](http://en.wikipedia.org/wiki/Electrical_overload). Thus, a current overload cannot be described as an operating condition of a device since, by definition, a current overload is a condition falling outside the device's operational design.



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Therefore, the Applicant respectfully submits that all the limitations of claim 1 are not found in Donazzi. Furthermore, the Applicant respectfully submits that claim 1 is allowable over the cited art and earnestly solicits notice of such allowance.

Claims 5, 6 and 24

Claims 5, 6 and 24 are dependent on and further limit claim 1. Since claim 1 is believed allowable to the reasons stated above, claims 5, 6 and 24 are also believed allowable for at least the same reasons as claim 1.

Claim 7

Claim 7 recites, "The method of claim 1, further comprising monitoring the current draw of significant circuit functions." In rejecting claim 7, the Examiner argues column 3, lines 32-36 of Donazzi teaches monitoring the current draw of significant circuit function.

The Applicant respectfully disagrees with this conclusion since the citation merely discusses determining an expected operating condition in segments of a current conducting link. Thus, there is no teaching in the citation of monitoring the current draw of significant circuit functions.

Thus, for at least this reason, and the reasons discussed for claim 1, claim 7 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 7.

Claim 4

Claim 4 is presently amended to include the elements and limitations of claims 2 and 3. Thus, claim 4 is rewritten in independent form, and is not amended to overcome the cited art or for reasons of patentability.

Claim 4 recites, in part, "A method for predicting the failure of an electronic circuit in an electronic device." The Examiner alleges that Donazzi also teaches such a system. The Applicant respectfully disagrees with such a conclusion. As discussed above for claim 1, Donazzi relates to analysis of electric power transmission and has nothing to do with predicting the failure of an electronic circuit in an electronic device.



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Claim 4 also recites, in part, "monitoring at least one operating condition of the electronic circuit, wherein the operating condition includes a clock frequency." In rejecting claim 4, the Office Action apparently alleges Donazzi teaches monitoring a clock frequency. The Applicant respectfully disagrees with such a reading of Donazzi.

The Office Action cites Donazzi at column 13, lines 10-18 as supporting the rejection of claim 4. This citation reads,

Such data are written, for example on the real time data database RTDDB, by the programmable logic controller unit PLC, at predetermined time frequency, for example every minute, or as soon as they are available from the distributed sensor acquisition unit DSAU and from the data acquisition unit DAU. This means that there is a continuous update of this data base. The data in the system description data base SDDB can instead be changed either by users or by some reconfiguration operation. Donazzi, col. 13, ln. 10-18.

The Applicant respectfully submits that the cited passage of Donazzi has no relationship to monitoring a clock frequency of a circuit and that someone skilled in the art would not interpret Donazzi to teach monitoring a clock frequency of an electronic circuit.

Furthermore, it is respectfully submitted that nowhere in Donazzi is there a teaching of "determining if the measured current draw is outside a pass range for the measured environmental condition and for the operating condition of the electronic circuit," as recited in claim 4. In rejecting claim 3, the Examiner apparently equates current overload to an operating condition of the electronic circuit. Such a conclusion contradicts the plain meaning of the term "current overload" and "operating condition."

A current overload is a situation where an electrical machine or system is subjected to a greater load than it was designed for. See [http://en.wikipedia.org/wiki/Electrical\\_overload](http://en.wikipedia.org/wiki/Electrical_overload). Thus, a current overload cannot be described as an operating condition of a device since, by definition, a current overload is a condition falling outside the device's operational design.

Therefore, the Applicant respectfully submits that not all the limitations of claim 4 are found in Donazzi. Furthermore, the



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Applicant respectfully submits that claim 4 is allowable over the cited art and earnestly solicits notice of such allowance.

Claim 8

Claim 8 recites, in part, "A system for predicting the failure of an electronic circuit." The Examiner alleges that Donazzi also teaches such a system. The Applicant respectfully disagrees with such a conclusion. As discussed above for claim 1, Donazzi relates to analysis of electric power transmission and has nothing to do with predicting the failure of an electronic circuit in an electronic device.

Claim 8 also recites, in part, "a circuit state monitor configured to determine at least one operating condition of the electronic circuit." In rejecting claim 8, the Office Action never cites any teaching in Donazzi of a circuit state monitor configured to determine at least one operating condition of the electronic circuit. The Applicant respectfully submits that Donazzi in fact does not teach a circuit state monitor configured to determine at least one operating condition of the electronic circuit.

Claim 8 further recites, in part, "a failure alert unit configured to provide an alert notification when the current draw to the electronic circuit is outside a pass range at the measured environmental condition and the measured operating condition of the electronic circuit." Although Donazzi does describe an alarm generation procedure at column 10, lines 63-65, it is respectfully submitted that this procedure does not include a measured operating condition of the electronic circuit.

As discussed above, it is additionally argued that current overload cannot be equated to an operating condition of an electronic circuit. A current overload is a situation where an electrical machine or system is subjected to a greater load than it was designed for. See [http://en.wikipedia.org/wiki/Electrical\\_overload](http://en.wikipedia.org/wiki/Electrical_overload). Thus, a current overload cannot be described as an operating condition of a device since, by definition, a current overload is a condition falling outside the device's operational design.



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Therefore, the Applicant respectfully submits that all the limitations of claim 8 are not found in Donazzi. Furthermore, the Applicant respectfully submits that claim 8 is allowable over the cited art and earnestly solicits notice of such allowance.

#### Claim 9

Claim 9 recites, "The system of claim 8, wherein the at least one operating condition includes a CPU utilization level." In rejecting claim 9, the Office Action apparently alleges Donazzi teaches monitoring a CPU utilization level. The Applicant respectfully disagrees with such a reading of Donazzi.

The Office Action cites Donazzi at column 9, lines 30-33 as supporting the rejection of claim 9. This citation reads, "The local processing unit LPU processes the received data, identifies critical data of each segment and of each link, performs alarm generation and stores historical and real time data." Donazzi, col. 9, ln. 30-33.

Donazzi teaches that sensor data is transferred from a local programmable logic controller unit (PLC) to the LPU, where the data is processed. Donazzi, col. 9, ln. 17-18 and 30-33. Clearly the LPU utilization level is not monitored by Donazzi. Specifically, Donazzi utilizes the LPU to process the sensor data collected along the transmission line.

Thus, for at least this reason, and the reasons discussed for claim 8, claim 9 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 9.

#### Claim 10

Claim 10 recites, "The system of claim 8, wherein the at least one operating condition includes a clock frequency." In rejecting claim 10, the Office Action apparently alleges Donazzi teaches monitoring a clock frequency. The Applicant respectfully disagrees with such a reading of Donazzi.

The Office Action cites Donazzi at column 13, lines 10-18 as supporting the rejection of claim 10. This citation reads,

Such data are written, for example on the real time data database RTDDB, by the programmable logic controller unit PLC, at



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predetermined time frequency, for example every minute, or as soon as they are available from the distributed sensor acquisition unit DSAU and from the data acquisition unit DAU. This means that there is a continuous update of this data base. The data in the system description data base SDDB can instead be changed either by users or by some reconfiguration operation. Donazzi, col. 13, ln. 10-18.

The Applicant respectfully submits that the cited passage of Donazzi has no relationship to monitoring a clock frequency of a circuit and that someone skilled in the art would not interpret Donazzi to teach monitoring a clock frequency of an electronic circuit.

Thus, for at least this reason, and the reasons discussed for claim 8, claim 10 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 10

Claims 11, 25 and 28

Claims 11, 25 and 28 are dependent on and further limit claim 8. Since claim 8 is believed allowable to the reasons stated above, claim s 11, 25 and 28 are also believed allowable for at least the same reasons as claim 8.

Claim 12

Claim 12 recites, "The system of claim 8, wherein the current monitor is further configured to measure the current draw of significant circuit functions." In rejecting claim 12, the Examiner argues column 3, lines 32-36 of Donazzi teaches monitoring the current draw of significant circuit function.

The Applicant respectfully disagrees with this conclusion since the citation merely discusses determining an expected operating condition in segments of a current conducting link. Thus, there is no teaching in the citation of monitoring the current draw of significant circuit functions.

Thus, for at least this reason, and the reasons discussed for claim 8, claim 12 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 12.

Claim 13



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Claim 13 recites, in part, "A method for manufacturing an electronic circuit." The Examiner alleges that Donazzi teaches a method for manufacturing an electronic circuit. Applicant respectfully disagrees with such a conclusion. As discussed above for claim 1, Donazzi relates to analysis of electric power transmission and has nothing to do with a method for manufacturing an electronic circuit.

Claim 13 also recites, in part, "assembling the electronic circuit." In rejecting claim 13, the Office Action never cites any teaching in Donazzi of assembling an electronic circuit. The Applicant respectfully submits that Donazzi in fact does not teach assembling an electronic circuit.

Claim 13 further recites, in part, "measuring a current draw of the electronic circuit at different environment conditions and operating conditions." The Applicant respectfully submits that Donazzi does not teach measuring a current draw of an electronic circuit at different environment conditions and operating conditions. As discussed above, current overload cannot be equated to an operating condition of an electronic circuit. Current overload is a situation where an electrical machine or system is subjected to a greater load than it was designed for. See [http://en.wikipedia.org/wiki/Electrical\\_overload](http://en.wikipedia.org/wiki/Electrical_overload). Thus, an current overload cannot be described as an operating condition of a device since, by definition, a current overload is a condition falling outside the device's operational design.

Claim 13 additionally recites, in part, "recording the current draw in an operating matrix configured to be used during normal operation of the electronic circuit." In rejecting claim 13, the Office Action never cites any teaching in Donazzi of recording a current draw in an operating matrix configured to be used during normal operation of the electronic circuit. The Applicant respectfully submits that Donazzi in fact does not teach recording a current draw in an operating matrix configured to be used during normal operation of the electronic circuit.

Therefore, the Applicant respectfully submits that all the limitations of claim 13 are not found in Donazzi. Furthermore, the



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Applicant respectfully submits that claim 13 is allowable over the cited art and earnestly solicits notice of such allowance.

Claims 14 and 26

Claims 14 and 26 are dependent on and further limit claim 13. Since claim 13 is believed allowable to the reasons stated above, claims 14 and 26 are also believed allowable for at least the same reasons as claim 13.

Claim 15

Claim 15 recites, "The method of claim 13, further comprising placing the assembled electronic circuit in a controlled environment." In rejecting claim 15, the Examiner argues column 18, lines 65-67 of Donazzi teaches placing the assembled electronic circuit in a controlled environment.

The cited passage of Donazzi states, "In this way, by predicting the cable link temperature it is possible to anticipate control actions in order not to overload or overheat the cable." Donazzi, col. 18, ln. 65-67. The Applicant respectfully submits that one skilled in the relevant art would not interpret the citation offered by the Examiner as teaching placing the assembled electronic circuit in a controlled environment," as recited by claim 15

Thus, for at least this reason, and the reasons discussed for claim 12, claim 15 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 15.

Claim 16

Claim 16 recites, "The method of claim 13, further comprising monitoring the current draw of significant circuit functions." In rejecting claim 16, the Examiner argues column 3, lines 32-36 of Donazzi teaches monitoring the current draw of significant circuit function.

The Applicant respectfully disagrees with this conclusion since the citation merely discusses determining an expected operating condition in segments of a current conducting link. Thus, there is no teaching in the citation of monitoring the current draw of significant circuit functions.



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Thus, for at least this reason, and the reasons discussed for claim 13, claim 16 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 16.

Claim 17

Claim 17 recites, in part, "computer readable program codes coupled to the tangible media for predicting the failure of an electronic circuit in an electronic device." The Examiner alleges that Donazzi also teaches computer readable program codes coupled to the tangible media for predicting the failure of an electronic circuit in an electronic device. The Applicant respectfully disagrees with such a conclusion. As discussed above for claim 1, Donazzi relates to analysis of electric power transmission and has nothing to do with predicting the failure of an electronic circuit in an electronic device.

For at least this reason claim 17 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 17.

Claim 18

Claim 18 recites, in part, "computer readable program code configured to cause the program to monitor at least one operating condition of the electronic circuit." It is respectfully submitted that nowhere in Donazzi is there a teaching of monitoring at least one operating condition of an electronic circuit. In rejecting claim 3, the Examiner apparently equates current overload to an operating condition of the electronic circuit. Such a conclusion contradicts the plain meaning of the term "current overload" and "operating condition."

A current overload is a situation where an electrical machine or system is subjected to a greater load than it was designed for. See [http://en.wikipedia.org/wiki/Electrical\\_overload](http://en.wikipedia.org/wiki/Electrical_overload). Thus, a current overload cannot be described as an operating condition of a device since, by definition, a current overload is a condition falling outside the device's operational design.

Thus, for at least this reason, and the reasons discussed for claim 17, claim 18 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 18.



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Claim 19

Claim 19 recites, "The computer program product of claim 18, wherein the operating condition includes a CPU utilization level." The Office Action apparently alleges Donazzi teaches monitoring a CPU utilization level. The Applicant respectfully disagrees with such a reading of Donazzi.

The Office Action cites Donazzi at column 9, lines 30-33 as supporting the rejection of claim 19. This citation reads, "The local processing unit LPU processes the received data, identifies critical data of each segment and of each link, performs alarm generation and stores historical and real time data." Donazzi, col. 9, ln. 30-33.

Donazzi teaches that sensor data is transferred from a local programmable logic controller unit (PLC) to the LPU, where the data is processed. Donazzi, col. 9, ln. 17-18 and 30-33. Clearly the LPU utilization level is not monitored by Donazzi. Specifically, Donazzi utilizes the LPU to process the sensor data collected along the transmission line.

Thus, for at least this reason, and the reasons discussed for claims 17 and 18, claim 19 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 19.

Claim 20

Claim 20 recites, "The computer program product of claim 18, wherein the operating condition includes a clock frequency." In rejecting claim 20, the Office Action apparently alleges Donazzi teaches monitoring a clock frequency. The Applicant respectfully disagrees with such a reading of Donazzi.

The Office Action cites Donazzi at column 13, lines 10-18 as supporting the rejection of claim 20. This citation reads,

Such data are written, for example on the real time data database RTDDB, by the programmable logic controller unit PLC, at predetermined time frequency, for example every minute, or as soon as they are available from the distributed sensor acquisition unit DSAU and from the data acquisition unit DAU. This means that there is a continuous update of this data base. The data in the system description data base SDDB can instead be changed either by users or by some reconfiguration operation. Donazzi, col. 13, ln. 10-18.



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The Applicant respectfully submits that the cited passage of Donazzi has no relationship to monitoring a clock frequency of a circuit and that someone skilled in the art would not interpret Donazzi to teach monitoring a clock frequency of an electronic circuit.

Thus, for at least this reason, and the reasons discussed for claims 17 and 18, claim 20 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 20.

#### Claims 21 and 27

Claims 21 and 27 are dependent on and further limit claim 17. Since claim 17 is believed allowable to the reasons stated above, claims 21 and 27 are also believed allowable for at least the same reasons as claim 17.

#### Claim 22

Claim 22 recites, "The computer program product of claim 17, further comprising computer readable program code configured to cause the program to monitor the current draw of significant circuit functions." In rejecting claim 22, the Examiner argues column 3, lines 32-36 of Donazzi teaches monitoring the current draw of significant circuit function.

The Applicant respectfully disagrees with this conclusion since the citation merely discusses determining an expected operating condition in segments of a current conducting link. Thus, there is no teaching in the citation of monitoring the current draw of significant circuit functions.

Thus, for at least this reason, and the reasons discussed for claim 17, claim 22 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 22.

#### Claim 23

Claim 23 recites, in part, "A system for predicting the failure of an electronic circuit in an electronic device." The Examiner alleges that Donazzi also teaches a system for predicting the failure of an electronic circuit in an electronic device. The Applicant respectfully disagrees with such a conclusion. As discussed above for claim 1, Donazzi relates to analysis of electric power transmission and has



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nothing to do with predicting the failure of an electronic circuit in an electronic device.

For at least this reason claim 23 is allowable over the cited art. The Applicant therefore earnestly solicits allowance of claim 23.


#### CONCLUSION

In view of the forgoing remarks, it is respectfully submitted that this case is now in condition for allowance and such action is respectfully requested. If any points remain at issue that the Examiner feels could best be resolved by a telephone interview, the Examiner is urged to contact the attorney below.

Please change Deposit Account 09-0466 the \$200 fee for the additional independent claim. No other fee is believed due with this Amendment, however, should such a fee be required please charge Deposit Account 09-0466. Should any extensions of time be required, please consider this a petition thereof and charge Deposit Account 09-0466 the required fee.

Respectfully submitted,

Dated: October 14, 2005

  
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